

US EPA ARCHIVE DOCUMENT

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Parts 261 and 302**

[FRL-3434-2]

**Hazardous Waste Management System; Identification and Listing of Hazardous Waste; and Designation, Reportable Quantities, and Notification****AGENCY:** Environmental Protection Agency.**ACTION:** Final rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is today amending its regulations under the Resource Conservation and Recovery Act (RCRA) by relisting as hazardous certain wastes generated from metal smelting operations. These wastes were previously listed as hazardous; however, the listings were suspended by the Agency in response to the enactment of the "Beville Amendment." The Agency is today removing the suspensions in direct response to a court order. Specifically, the Agency is adding six wastes to the list of hazardous wastes from specific sources (40 CFR 261.32). The Agency is also amending the regulations promulgated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) at 40 CFR Part 302, which designates these wastes as CERCLA hazardous substances and establishes the reportable quantities applicable to these wastes.

The effect of removing the suspensions and thereby relisting these six wastes as hazardous is to subject them to the hazardous waste regulation requirements of Parts 262 through 266, 270, 271, and 124 of this chapter, and to the notification requirements of section 3010 of RCRA.

**DATES:** This final rule is effective March 13, 1989.

**FOR FURTHER INFORMATION CONTACT:** For further information on this listing action, contact the RCRA/Superfund hotline at (800) 424-9346 (toll free) or David Topping at (202) 382-7737.

**ADDRESSES:** Copies of materials relevant to this rule are located in the Docket at U.S. EPA, 401 M Street, SW., Washington, DC 20460. The docket number for this rulemaking is F-88-SWRF-FFFF. The docket is located in the sub-basement; the public must make an appointment in order to review them by calling (202) 475-9327. The docket is available for inspection from 9:00 a.m. to 4:00 p.m., Monday through Friday. The public may copy materials in the docket at a cost of \$0.15 per page.

**SUPPLEMENTARY INFORMATION:**

- I. Background
  - A. History
  - B. Court Decision
- II. Description of and Rationale for Today's Action
  - A. 1981 Suspensions are Lifted
  - B. Primary Copper Smelting and Refining
  - C. Primary Lead Smelting
  - D. Primary Zinc Smelting and Refining
  - E. Primary Aluminum Reduction
  - F. Ferroalloys
  - G. Identification of Impact on Regulated Community
- III. Future Action on these Listings
- IV. State Authority
  - A. Applicability of Rules in Authorized States
  - B. Effect on State Authorizations
- V. CERCLA Designation and Reportable Quantities
- VI. Economic Impact Analysis
  - A. Scope and Coverage of Economic Analysis
  - B. Methodology and Data Gathering
  - C. Costs of Compliance
  - D. Economic Impacts
    - 1. Production Costs and Prices
    - 2. Capital Investment and Rates of Return
    - 3. Plant Closures and Employment Losses
    - 4. Compliance with Executive Order 12291
- VII. Regulatory Flexibility Act
- VIII. Effective Date
  - A. Notice and Comment Requirements
  - B. Notification
  - C. Compliance Dates
    - 1. Interim Status in Unauthorized States
    - 2. Interim Status in Authorized States
- IX. Paperwork Reduction Act
  - List of Subjects

**I. Background****A. History**

On December 18, 1978 (43 FR 58946), EPA proposed its initial regulations for hazardous waste management under Subtitle C of RCRA. These proposed regulations, among other things, identified a universe of so-called "special wastes" that are generated in large volumes, were thought to pose less of a hazard than other hazardous wastes, and were thought to not be amenable to all of the control techniques proposed for other types of RCRA hazardous wastes. EPA identified waste materials from the "extraction, beneficiation, and processing of ores and minerals," *i.e.*, mining waste, as one such "special waste" under the proposed regulations.

Then, on May 19, 1980, EPA promulgated the final hazardous waste management regulations. In promulgating these regulations, the Agency did not finalize the "special waste" category. The Agency's basis for this was twofold: (1) The extraction procedure (EP) toxicity and corrosivity characteristics had been narrowed to

exclude most "special wastes" from control and (2) the Agency was expecting to promulgate tailored standards for land disposal, as needed, in future regulations. However, at the same time and shortly thereafter, EPA listed as hazardous (as an interim final rule) eight wastes that are generated from primary metal smelters (45 FR 33112, May 19, 1980, and 45 FR 47832, July 16, 1980), including the six waste streams listed by today's notice.

On October 21, 1980, Congress enacted Pub. L. 96-482, which included various amendments to RCRA. Section 8002 was amended to include subsection (p), which required the Administrator to study the adverse effects on human health and the environment, if any, of waste from the disposal and utilization of "solid waste from the extraction, beneficiation, and processing of ores and minerals, including phosphate rock and overburden from the mining of uranium ore," and submit a Report to Congress on its findings by October 21, 1983. Section 7 of these amendments (the "Bevill Amendment") amended section 3001 of RCRA to exclude these wastes from regulation as hazardous wastes under Subtitle C of RCRA pending completion of the studies called for in sections 8002 (f) and (p).

On November 19, 1980, EPA published an interim final amendment to its hazardous waste regulations to reflect the mining waste exclusion. In this notice, EPA explained that it interpreted the exclusion to include "solid waste from the exploration, mining, milling, smelting, and refining of ores and minerals" (45 FR 76619). EPA also indicated that it intended to reconsider its interpretation of the exclusion in the future, particularly as it applied to smelting and refining wastes. The notice also indicated that any subsequent action to narrow the scope of the exclusion would be through rulemaking.

To be consistent with its interpretation of the scope of the exclusion expressed in the November 19, 1980 notice, the Agency suspended the listings for five smelter wastes which it promulgated as final-final on November 12, 1980 (see 45 FR 76618); in addition, on January 16, 1981, the Agency suspended the other wastes which were promulgated as interim final on July 16, 1980. In suspending all of these listings, the Agency made it clear that although these wastes met the criteria for listing in 40 CFR 261.11, they appeared to come within the ambit of the "Bevill" exclusion.

In 1984, several environmental organizations challenged EPA's failure to complete the required studies under

sections 8002 (f) and (p) by the statutory deadline. *Concerned Citizens of Adamstown v. EPA*, Civ. No. 84-3041, (D.D.C.). As a result, the District Court ordered EPA to complete the studies and to take action on a planned proposed rulemaking reinterpreting the scope of the mining waste exclusion.

On October 2, 1985, under the court order in *Adamstown*, EPA proposed to narrow the scope of the mining waste exclusion (50 FR 40292). In preparing this proposed reinterpretation, EPA was unable to find any accepted standard definitions, *i.e.*, plain meanings, for the terms of the mining waste exclusion, particularly the term "processing." Therefore, EPA next looked to the legislative history to aid in defining the intended scope of the mining waste exclusion. The Agency's review indicated that the exclusion was intended to cover the category of wastes that were designated as "special wastes" in the proposed hazardous waste regulations at 43 FR 58946 (December 18, 1978). These "special wastes" included "solid wastes from the extraction, beneficiation, and processing of ores and minerals." As mentioned earlier, EPA interpreted "special wastes" to be those that are generated in large volumes and pose less of a hazard than other hazardous wastes. EPA adopted this "high volume, low hazard" concept as the basis for the proposed reinterpretation. Specifically, EPA proposed to reinterpret the exclusion so that red and brown bauxite refining muds, phosphogypsum, slag from phosphorous reduction, and slag from primary metal smelters would be the only processing wastes covered by the mining waste exclusion because EPA believed these were the only processing wastes that met the "special waste" criteria. However, EPA requested that commenters identify any other processing wastes that met the "special waste" criteria and, therefore, should remain within the mining waste exclusion.

Under this proposed reinterpretation, the suspension of the six smelter waste listings would be removed since they would no longer be considered "special wastes". Therefore, the notice proposed to relist the six smelter wastes.<sup>1</sup>

Subsequently, on October 9, 1986, the Agency announced that it was withdrawing its proposed reinterpretation (51 FR 38233). The

<sup>1</sup> The two other waste streams suspended in 1981 (K087 and K088), were not proposed for relisting in 1985 and are not relisted here today. As explained in 1985, these two waste streams do not meet EPA's current definition of solid waste (see 50 FR 40296-97).

Agency explained that it was withdrawing the reinterpretation because the terms "high volume" and "low hazard" had not been quantified in the proposal and, therefore, the Agency was unable to determine the status of additional wastes nominated by commenters as "special wastes" (51 FR 36234). While it did not view the "high volume, low hazard" standard as inherently unsound, EPA pointed to various definitional problems it faced in determining how to group and classify these wastes. The Agency concluded that its proposal had to be withdrawn because it failed to set out "practically applicable criteria for distinguishing processing from non-processing wastes" and because there was insufficient time to repropose a rule in light of the *Adamstown* deadline. The withdrawal of the proposed reinterpretation effectively continued the suspension of the six smelter waste listings.

Subsequently, two suits were filed against EPA challenging the Agency's decision to withdraw its proposed reinterpretation of the mining waste exclusion. The cases, *Environmental Defense Fund v. EPA*, No. 86-1584 (D.C. Cir.) ("*EDF*") and *Hazardous Waste Treatment Council v. EPA*, No. 86-1691 (D.C. Cir.) were decided on July 29, 1988.

#### B. Court Decision

The U.S. Court of Appeals for the D.C. Circuit ruled in *EDF* that EPA's decision to withdraw the proposed reinterpretation and failure to relist the six smelting and refining wastes was arbitrary and capricious. The Court found that EPA's inclusion of all smelting and refining wastes in the "Bevill" exclusion for ore processing wastes was "impermissibly overbroad" and contrary to Congressional intent. *EDF v. EPA*, No. 86-1584 (D.C. Cir. July 29, 1988), slip op. at 20. While the court conceded that the statutory term "processing" is ambiguous, the Court nonetheless found EPA's interpretation to be unreasonable in light of "clear" legislative history that suggested that Congress had intended the Bevill Amendment to be limited to those ore processing wastes which meet EPA's 1978 "special waste" concept, *i.e.*, those solid wastes which are high volume and low hazard. *Id.* at 22, 25-26.

The Court also rejected EPA's justification for withdrawal of the proposed reinterpretation. The Court noted that EPA could have asked the district court for additional time to refine its 1985 proposal. By withdrawing the proposed reinterpretation in its entirety, including the relisting of the six smelter wastes, EPA failed to meet its statutory obligation either to study

smelting and refining wastes under 8002(p) or to reinterpret the scope of the exclusion. Slip op. at 28-29.

In its order for relief, the Court directed EPA to relist the six smelter wastes by August 31, 1988. The Court noted that, regardless of the status of any additional processing wastes, the six smelter wastes clearly would not fit any definition of "high volume, low hazard." Slip op. at 30. In summary, the Court found that the six wastes cannot, as a matter of law, be excluded from regulation under the Bevill amendment and must be regulated under Subtitle C if they meet the listing or identification criteria for hazardous wastes under 40 CFR 261.10 and 261.11.

In addition to relisting the six wastes, EPA must, by October 15th, propose which "high volume, low hazard" wastes from ore processing it will study under section 8002(p) of RCRA. EPA must finalize that proposal by February 15, 1989, and submit a Report to Congress on the large-volume processing wastes on the final February 15th list by July 31, 1989.<sup>2</sup> In a forthcoming Federal Register notice, EPA will propose new criteria for determining which ore processing wastes are "high volume, low hazard" and will designate those wastes which meet the criteria for study under section 8002(p).

## II. Description of and Rationale for Today's Action

### A. 1981 Suspensions are Lifted

As directed by court order, EPA is today reinstating the hazardous waste listing for six wastes associated with smelting operations (see Table 1).<sup>3</sup> These wastes were originally listed on May 19, 1980, and July 16, 1980, but were suspended from the listing regulations after the Bevill Amendment was enacted (see 45 FR 76618, November 19, 1980, 46 FR 4615, January 16, 1981, and 46 FR 27473, May 20, 1981). As a result of today's action, the six wastes are again

<sup>2</sup> In its July 29 opinion, the Court initially mandated deadlines of August 31, 1988; December 31, 1988; and January 31, 1989, respectively. On August 23, the Court granted in part EPA's petition for rehearing and modified the schedule to the one listed above.

<sup>3</sup> In a letter dated August 26, 1988 from counsel for Phelps Dodge Corporation, they suggested that the Agency could meet the recent order of the United States Court of Appeal ordering EPA to regulate six mineral processing wastes as hazardous wastes under Subtitle C of RCRA by simply removing these wastes from the Bevill exclusion and not relisting the wastes. The Agency wishes to clarify that its decision to list these wastes today is based on its evaluation of the listing criteria (*i.e.*, these wastes are hazardous) as well as the court finding that these wastes are not Bevill wastes. For further discussion, see Section III of this preamble.

defined as hazardous wastes based upon the reasons set forth in the May 19 and July 16, 1980, listings (see 45 FR 33113, 45 FR 47834, and the associated Listing Background Documents for these waste streams).

TABLE 1.—SMELTER WASTES LISTED AS HAZARDOUS

Industry	EPA hazardous waste No.	Hazardous waste	Hazard code <sup>1</sup>
Primary copper..	K064	Acid plant blow-down slurry/sludge resulting from the thickening of blow-down slurry from primary copper production.	(T)
Primary lead.....	K065	Surface impoundment solids contained in and degraded from surface impoundments at primary lead smelting facilities.	(T)
Primary zinc.....	K066	Sludge from treatment of process wastewater and/or acid plant blow-down from primary zinc production.	(T)
Primary aluminum.	K088	Spent potliners from primary aluminum reduction.	(T)
Ferroalloys.....	K090	Emission control dust or sludge from ferrochromium-silicon production.	(T)

TABLE 1.—SMELTER WASTES LISTED AS HAZARDOUS—Continued

Industry	EPA hazardous waste No.	Hazardous waste	Hazard code <sup>1</sup>
	K091	Emission control dust or sludge from ferrochromium production.	(T)

<sup>1</sup> Hazard code "T" indicates that the waste is listed due to its toxicity (see 40 CFR 261.3(b)).

In addition to listing the six wastes as hazardous at 40 CFR 261.32, EPA is amending the definition of the mining waste exclusion found at 40 CFR 261.4(b)(7) to further clarify that these six wastes do not meet the definition of "processing of ores and minerals." In response to the Court's order, EPA will, by October 15, 1988 propose additional amendments to this paragraph to specifically list only those processing wastes which do fall within the exclusion accordingly to the "high volume, low hazard" criteria which EPA is in the process of developing.

**B. Primary Copper Smelting and Refining; EPA Hazardous Waste No. K064—Acid Plant Blowdown Slurry/Sludge Resulting from the Thickening of Blowdown Slurry (T)**

Acid plant blowdown slurry/sludge, resulting from the thickening of blowdown slurry, is a waste stream generated at facilities where primary copper is smelted in a reverberatory furnace. The waste arises from the acid plant, which constitutes the principal controller for removal of sulfur dioxide from furnace and converter off-gases. The blowdown slurry from the acid plant is often thickened and the bulk of the solids content recycled to the reverberatory furnace. The overflow from the thickener contains both suspended and dissolved solids. The suspended solids are settled in surface impoundments and recycled to the smelter; the dissolved solids are discharged with the surface impoundment effluent, often to a tailings pond. It is the thickened slurry, the settled suspended solids from the thickener overflow, and the sludges that form from the dissolved solids in the thickener overflow that are the subject of this listing. The Agency's decision to subject these wastes to RCRA Subtitle C requirements includes consideration of the following factors:

1. Acid plant blowdown slurry contains high concentrations of the heavy metals lead and cadmium.
2. Lead and cadmium are toxic and are included in the list of hazardous constituents at Appendix VIII of 40 CFR Part 261.
3. A solubility study has indicated that lead and cadmium can be leached from these wastes by even a mild (distilled water) leaching medium. Therefore, even under mild conditions, the possibility of ground water contamination via leaching exists if these wastes are improperly disposed. Further, lead and cadmium do not degrade, so that contamination, and the potential for contaminant contact with living receptors will be long-term.

These and other factors considered by the Agency are explained in the Listing Background Document for Primary Copper Smelting and Refining.

**C. Primary Lead Smelting; EPA Hazardous Waste No. K065—Surface Impoundment Solids Contained in and Dredged from Surface Impoundments at Primary Lead Smelting Facilities (T)**

The smelting of primary lead produces a number of waste streams and slurries, including acid plant blowdown, slag granulation water, and plant washwater. These wastewaters and slurries are sent to treatment and storage or disposal impoundments to settle or precipitate out the solids. These solids may be left in the lagoons, or they may be periodically dredged and disposed of or recycled. The Agency's decision to subject these wastes to RCRA Subtitle C requirements includes consideration of the following factors:

1. These solids contain significant concentrations of the heavy metals lead and cadmium.
2. Lead and cadmium are toxic and are included in the list of hazardous constituents at Appendix VIII of 40 CFR Part 261.
3. Lead and cadmium have been shown to leach from samples of the waste that were subjected to an extraction procedure designed to predict the release of contaminants into the environment. If the wastes are not properly managed, leachate could migrate from the waste disposal site and contaminate underlying drinking water sources. Further, lead and cadmium do not degrade, so that contamination, and the potential for contaminant contact with living receptors, will be long-term.

These and other factors considered by the Agency are further explained in the Listing Background Document for Primary Lead Smelting.

US EPA ARCHIVE DOCUMENT

There is a further question relating to relisting these surface impoundment solids—whether they can be classified as "solid wastes" when they are destined for recycling by being reclaimed to recover contained lead values. Based on information compiled in 1985, it appears that large percentages of these surface impoundment solids are eventually removed from surface impoundments and reclaimed, albeit the period between generation and reclamation often extended for years. (50 FR 40297, October 2, 1985.) The Agency also anticipated that the percentage of surface impoundment solids being reclaimed could decrease due to declining lead demand. Id.

In response to the court's opinion in *American Mining Congress v. EPA*, 824 F. 2d 1177 (D.C. Cir. 1987), EPA has tentatively interpreted its jurisdiction over hazardous secondary material recycling activities to exclude those materials that are reused within an industry's on-going production process. Recycling activities involving elements of discarding, on the other hand, can continue to involve solid wastes. (53 FR 519, January 8, 1988.) EPA also proposed that in evaluating whether sludges (such as the primary lead surface impoundment solids at issue here) and by-products being reclaimed can be considered to be solid wastes, it would evaluate the following factors bearing on whether the material was being discarded or was being used as part of a continuous on-going manufacturing process: (a) Whether the sludge or by-product is typically recycled on an industry-wide basis; (b) whether the material is replacing a raw material and the degree to which it is similar in composition to the raw material; (c) the relation of the recovery practice to the principal activity of the facility; and (d) whether the secondary material is managed in a way designed to minimize loss, plus other relevant factors. (53 FR 526.) EPA had previously proposed use of these same factors in its discussion of whether to list the primary lead surface impoundment solids in the October, 1985 rulemaking. (50 FR 40, 296-297.)

It seems clear that surface impoundments in the primary lead industry are not part of the primary lead production process, and that the solids in these impoundments are not in-process materials but rather are generated incidentally in the course of wastewater treatment. The purpose of surface impoundments in the primary lead industry is to provide quiescent settling to remove pollutants from wastewater before discharge. (Ponds are sometimes used to equalize wastewater

flow into treatment units as well.) Indeed, industry characterized its impoundments as wastewater treatment units in all of its submittals to the Agency during the rulemaking to develop effluent limitations guidelines for the industry. (The industry's argument, in fact, was that surface impoundments are *essential* wastewater treatment devices in the primary lead industry, and could not even be replaced with tanks.) Any recovery of the solids that settle out, or are precipitated out of the wastewater routed to these surface impoundments, is thus incidental to the principal purpose of wastewater treatment. Consequently, these wastewater treatment impoundments are RCRA subtitle C regulated units.<sup>4</sup>

Another way of ascertaining whether these surface impoundment solids (*i.e.*, wastewater treatment solids) are in-process materials or wastes is to compare the mode of handling and storage of these solids with the way raw materials to the primary lead process are handled and stored before smelting. The surface impoundment solids are stored for long periods of time (often years) under tens of millions of gallons of water. The surface impoundments in which they are generated and stored are not designed to hold these solids securely. In fact, as has long been documented, surface impoundments are inherently insecure storage units with a high potential for contaminating groundwater. (See, *e.g.*, 50 FR 40297.) In contrast, normal lead ores are stored securely for short periods of time before being charged to the smelter; to the Agency's knowledge they are never stored underwater. Materials held insecurely underwater for long periods of time in a manner completely unlike the way raw materials are normally handled in the industry are not in-process materials and are being discarded, in the Agency's view.<sup>5</sup> Indeed, these surface impoundment solids might also be covered by the speculative accumulation provisions in 40 CFR 261.2(c)(4) simply due to the length of time they are accumulated.

<sup>4</sup> See letter from Douglas McAllister to James Berlow, dated May 27, 1983, and the memorandum from Mark Hereth to James Berlow, dated November 21, 1983. These documents are available in the public docket for today's notice.

<sup>5</sup> Once these wastes are actually removed from the impoundment and smelted, they would no longer be subject to RCRA, assuming they are resmelted in a primary lead process. (See, *e.g.*, 53 FR 31162, August 17, 1988, explaining the principle that a listed sludge or by-product can be indigenous to certain processes and so cease being waste when it actually is reclaimed.) Surface impoundments in which these wastes are generated and stored, however, remain regulated units.

Given that the purpose of surface impoundments in this industry is to treat wastewater and not to serve as an adjunct to the lead smelting process, EPA does not need to base its decision on the proposed factors discussed in the October 2, 1985 and January 8, 1988 proposals. However, the Agency notes that its decision to list would be the same were it to rely on these factors. The method in which a material is handled before recycling is a relevant decision factor (and was a basis for EPA's proposed decision in 1985), and as discussed above, storage of long duration in insecure surface impoundments is not commensurate with calling a material a valuable in-process material which is not being discarded.<sup>6</sup>

Other issues relating to whether the materials being listed today can be classified as solid wastes when they are recycled are addressed in a separate background document entitled "Background Information for Listing of 6 Smelting Wastes—Solid Waste Determination." This document is contained in the public docket for today's notice.

#### *D. Primary Zinc Smelting and Refining: EPA Hazardous Waste No. K066—Sludge from Treatment of Process Wastewater and/or Acid Plant Blowdown (T)*

In primary zinc smelting and refining processes, cadmium and lead contaminants present in the raw materials are carried through numerous processes. These contaminants are subsequently found in sludges generated by treatment of process wastewater and/or acid plant blowdown. It is these sludges (*i.e.*, not the process wastewaters) that is the subject of this listing. The Agency's decision to subject these wastes to RCRA Subtitle C requirements includes consideration of the following factors:

<sup>6</sup> EPA notes that in its 1985 decision, it distinguished carefully between the lead surface impoundment wastes and two other materials (electrolytic anode slimes/sludges and cadmium plant leach residue) from primary zinc smelting, both of which EPA determined would not be solid wastes when they are recycled. This is because the material are recycled (normally in the process from which they were generated) a short time after being generated, and are stored in a manner to avoid discarding (storage in bins or concrete basins) before they are recycled. The Agency found that these were indeed in-process materials that are more commodity-like than waste-like and thus determined not to list them. (50 FR 40297.) EPA believes the distinction between these materials and the primary lead surface impoundment solids remains valid.

1. The wastes contain significant concentrations of the heavy metals cadmium and lead.

2. Cadmium and lead are toxic and are included in the list of hazardous constituents at Appendix VIII of 40 CFR Part 261.

3. Cadmium and lead have been shown to leach from samples of these wastes when the samples were subjected to a distilled water extraction procedure. Therefore, even under mild conditions, the possibility of ground water contamination via leaching may exist if these wastes are mismanaged. Further, cadmium and lead do not degrade, so that contamination, and the potential for contaminant contact with living receptors, will be long-term.

These and other factors considered by the Agency are further explained in the Listing Background Document for Primary Zinc Smelting and Refining.

*E. Primary Aluminum Reduction: EPA Hazardous Waste No. K088—Spent Potliners from Primary Aluminum Reduction (T)*

Primary aluminum metal is produced by the electrolytic reduction of alumina, an aluminum oxide. This process takes place in carbon-lined, cast-iron electrolytic cells known as "pots." After continued use, the carbon pot lining ("potliner") cracks and must be removed and replaced with a new potliner. The Agency's decision to subject these wastes to RCRA Subtitle C requirements includes consideration of the following factors:

1. Spent potliners from primary aluminum reduction may contain significant amounts of iron cyanide complexes. EPA has detected both iron cyanide complexes (expressed as cyanides) and free cyanide in spent potliners in significant concentrations.

2. Free cyanide is extremely toxic to both humans and aquatic life if ingested.

3. Available data indicate that significant amounts of free cyanide and iron cyanide will leach from potliners if the spent potliners are stored or disposed in unprotected piles outdoors and are exposed to rainwater. In fact, the leachability of cyanide from potliners is evidenced by a damage incident in which private wells in the vicinity of a spent potliner disposal facility were contaminated with cyanide (see the Listing Background Document for Primary Aluminum Reduction). In addition, in the presence of sunlight, the cyanide complexes may decompose to release highly toxic hydrogen cyanide into the environment.

These and other factors considered by the Agency are further explained in the

*Listing Background Document for Primary Aluminum Reduction.*

*F. Ferroalloys: EPA Hazardous Waste Nos. K090—Emission Control Dust or Sludge from Ferrochromiumsilicon Production (T); and K091—Emission Control Dust or Sludge from Ferrochromium Production*

These wastes are generated when particulates entrained in the reaction gases given off by electric furnaces during the smelting process are removed by air pollution control equipment. Dry collection methods generate a dust, while wet collection methods generate a sludge-like residue.<sup>7</sup> The Agency's decision to subject these wastes to RCRA Subtitle C requirements includes consideration of the following factors:

1. Emission control dust and sludges from ferrochromiumsilicon and ferrochromium production contain high concentrations of chromium.

2. Chromium is toxic and is included in the list of hazardous constituents at Appendix VIII of 40 CFR Part 261.

3. Chromium has been shown to leach from these wastes. Thus, ground water contamination could occur if these wastes are mismanaged. Further, chromium does not degrade, so that contamination, and the potential for contaminant contact with living receptors, will be long-term.

These and other factors considered by the Agency are further explained in the Listing Background Document for Ferroalloys.

*G. Identification of Impact on Regulated Community*

The community to be regulated under this listing action is composed of facilities that electrolytically refine copper and zinc, or that are primary producers of lead, lead alloys, aluminum metal, and specific chrome-related ferroalloys. This community will be affected in two ways by this listing: They must comply with EPA generator requirements found at 40 CFR Part 262. In addition, if they treat, store, or dispose of their wastes in such a manner that a RCRA permit is required under 40 CFR Part 270, they must obtain a permit and comply with the standards found at 40 CFR Parts 264 and 265. Finally, disposal of these wastes must comply with the standards to be promulgated under the land disposal restrictions (LDR) program (40 CFR Part 268).

Most of the facilities affected by today's rule have in the past not been

<sup>7</sup> The definition of sludge includes all pollution control residue (see 40 CFR 260.10); therefore, the residue generated by both the dry and wet collection methods are sludges for the purposes of the hazardous waste rules.

subject to the RCRA hazardous waste requirements since their operations were excluded from RCRA regulation under the Bevill Amendment. Because these facilities will become generators of hazardous wastes, they will have to obtain an EPA identification number and comply with the generator standards contained in 40 CFR Part 262. In addition, if any of these facilities will treat, store, or dispose of these wastes in such a manner that will require them to obtain a permit, they will need to submit a Part A application and notify pursuant to section 3010 of RCRA to obtain interim status for their current hazardous waste treatment, storage, and disposal operations and subsequently apply for a final permit under RCRA Part B provisions. The schedules for these requirements are contained in section VIII of today's preamble.

Completion of the Part B applications will require individual facilities to compile and develop information on their on-site waste management operations including, but not limited to: Ground water monitoring (if land management is involved); manifest systems, recordkeeping, and reporting; closure and possibly, post-closure requirements; and financial requirements. The Part B applications may also require development of engineering plans to upgrade existing facilities.

In addition to being affected by the generator and permit requirements, as well as the interim status standards found in 40 CFR Part 265, these segments of the primary metals industry will (in the future) also be subject to the LDR standards. As mandated by section 3004(g)(4) of RCRA, newly listed waste streams, such as those that are the subject of today's notice, are prohibited from land disposal unless EPA develops standards for the treatment of each of the waste streams. These standards are to be promulgated within six months of today's final rulemaking. Under EPA regulations, standards must require treatment of the wastes to a level or by a method that reflects the use of Best Demonstrated Available Technology before they can be land disposed. Thus, one future implication will be the ban on the land disposal of these wastes unless they are suitably pretreated prior to land disposal. Also, facilities with existing permits and permit applications currently treating, storing, or disposing of these wastes will have to amend or modify their permits or applications to include provisions applicable to the management of one or more of the six wastes which are the subject of today's rulemaking.

### III. Future Action on These Listings

As explained above, today's action removes the suspension on the 1980 listings of these six wastes. As a result, EPA's determination that these wastes are hazardous is based on its evaluation of the hazardousness of these wastes in 1980. Since that time, EPA has received additional information regarding these six wastes. Some of these data were received as comments to EPA's 1985 proposed reinterpretation. Other data were received more recently as EPA was preparing an 8002(p) study and Report to Congress on these wastes and other waste streams from the lead, copper, zinc, aluminum, and bauxite sectors.<sup>8</sup> The post-1980 data submitted to EPA are relevant primarily to issues other than the inherent hazardousness of these six wastes. They include revised waste generation rates, current waste management practices (including the extent to which the wastes are recycled), and industry economic data. To a lesser degree, EPA has received data on the physical/chemical properties of these wastes and their hazardousness.

Since the issuance of the Court's opinion, EPA has conducted a review of some of the waste characterization data received since 1980. While EPA did not, in light of the short time-frame for publication of this rule, exhaustively evaluate all of the post-1980 waste characterization data submitted, the review that was conducted tends to corroborate and confirm that the six waste streams meet the criteria for hazardousness found in section 3001(a) of RCRA. EPA's review suggests that no data have been submitted which would clearly contradict EPA's 1980 decision to list the six smelter wastes, *i.e.*, no data are available to refute the basic conclusion that these wastes contain significant concentrations of toxic constituents and that the constituents are mobile and persistent. Therefore, EPA continues to believe that each of these wastes meets the criteria for listing as hazardous waste found at 40 CFR 261.11 and sees no reason not to resume the 1980 listings of these six wastes at this time.

EPA nevertheless intends to thoroughly evaluate all information and comments submitted since 1980 regarding the hazardousness of these six wastes. Responses to a number of the comments are included in the docket for today's notice. The Agency will respond

<sup>8</sup> In light of the Court's order to relist the six smelter wastes, EPA does not plan to complete and submit this Report to Congress. However, some of the information collected will be used to develop a new Report, as required by the Court's order.

to the remainder of the comments within the next few months. EPA will treat any post-1980 submissions as a petition for rulemaking to reconsider these listings. EPA will publish a subsequent Federal Register notice on the results of its more detailed evaluation of these six wastes pursuant to 40 CFR 260.20. That evaluation will consider new data received in a timely manner as well as the currently available data.

### IV. State Authority

#### A. Applicability of Rules in Authorized States

Under section 3006 of RCRA, EPA may authorize qualified States to administer and enforce the RCRA program within the State. (See 40 CFR Part 271 for the standards and requirements for authorization.) Following authorization, EPA retains enforcement authority under sections 3008, 7003, and 3013 of RCRA, although authorized States have primary enforcement responsibility.

Prior to HSWA, a State with final authorization administered its hazardous waste program entirely in lieu of EPA administering the Federal program in that State. The Federal requirements no longer applied in the authorized State, and EPA could not issue permits for any facilities in the State that was authorized to permit. When new, more stringent Federal requirements were promulgated or enacted, the State was obliged to enact equivalent authority within specified time frames. New Federal requirements did not take effect in an authorized State until the State adopted the requirements as State law.

In contrast, under section 3006(g) of RCRA, 42 U.S.C. 6926(g), new requirements and prohibitions imposed by HSWA take effect in authorized States at the same time that they take effect in non-authorized States. EPA is directed to implement those requirements and prohibitions in authorized States, including the issuance of permits, until the State is granted authorization to do so. While States must still adopt HSWA-related provisions as State law to retain final authorization, the HSWA provisions apply in authorized States in the interim.

#### B. Effect on State Authorizations

Today's final listings are not effective in authorized States since the listings are not being issued pursuant to the HSWA. Thus, RCRA hazardous waste management standards for the wastes listed today will be applicable only in those States that do not have interim or final authorization by the effective date

of this regulation. In authorized States, the standards will not be applicable until the State revises its program to adopt equivalent requirements under State law.

40 CFR 271.21(e)(2) requires that States that have final authorization must modify their programs to reflect Federal program changes and must subsequently submit the modifications to EPA for approval. The deadline by which the State must modify its program to adopt today's rule is July 1, 1990, if no statutory change is needed or is July 1, 1991, if a statutory change is needed. These deadlines can be extended in certain cases (40 CFR 271.21(e)(3)). Once EPA approves the modification, the State requirements become Subtitle C RCRA requirements.

States with authorized RCRA programs already may have regulations similar to those in today's rule. These State regulations have not been assessed against the Federal regulations being promulgated today to determine whether they meet the tests for authorization. Thus, a State is not authorized to carry out these requirements in lieu of EPA until the State program modification is submitted to EPA and approved. Of course, States with existing standards may continue to administer and enforce their standards as a matter of State law.

States that submit official applications for final authorization less than 12 months after the effective date of these standards are not required to include standards equivalent to these standards in their application. However, the State must modify its program by the deadlines set forth in § 271.21(e). States that submit official applications for final authorization 12 months after the effective date of these standards must include standards equivalent to these standards in their application. 40 CFR 271.3 sets forth the requirements a State must meet when submitting its final authorization application.

### V. CERCLA Designation and Reportable Quantities

The wastes listed as hazardous in today's rule will, on the effective date, automatically become hazardous substances under section 101(14) CERCLA, as amended. CERCLA section 103(a) requires that persons in charge of vessels or facilities from which a hazardous substance has been released in a quantity that is equal to or greater than its reportable quantity (RQ) immediately notify the National Response Center (at (800) 424-8802 or at (202) 426-2675) of the release.

Under section 102(b) of CERCLA, new RCRA hazardous waste listings that have not been previously designated as hazardous under CERCLA have the statutorily imposed RQ of one pound unless or until adjusted by regulation. In order to coordinate the RCRA and CERCLA rulemakings with respect to new waste listings, the Agency today is promulgating regulatory amendments under CERCLA authority in connection with the listing of wastes K064, K065, K066, K088, K090, and K091. The Agency is adding wastes K064, K065, K066, K088, K090, and K091 to 40 CFR 302.4, the codified list of CERCLA hazardous substances and publishing (as part of this listing) the statutory RQ of one pound for each of the wastes. The Agency may propose to adjust the statutory one-pound RQ for each of these wastes in a future rulemaking. Such adjustments would be based upon the RQ's of the hazardous constituents in each of the listed wastes.

#### I. Economic Impact Analysis

In 1985, the Agency conducted cost and economic impact studies to analyze the potential impact of the proposed reinterpretation to determine whether the regulation would have been a major rulemaking (under Executive Order 12291) or would cause significant impacts on small business (pursuant to the Regulatory Flexibility Act). Although EPA determined that the rule was not a "major" rule, detailed cost and impact studies were performed in 1985 for a substantial portion of the potentially affected industry sectors. Although not reported on separately for economic cost and impact purposes, the six waste streams subject to today's listing comprise a relatively small part of the sectors and waste streams studied for the 1985 reinterpretation rule.

EPA received numerous comments on its 1985 studies. Some commenters stated that the Agency had mischaracterized the economic impact of the rule. The Agency conducted a detailed review and made extensive revisions to the 1985 cost data. However, those revisions would not cause the Agency to change its conclusion that the original 1985 proposed reinterpretation is not a "major rule." Since today's rule includes only six listed waste streams from four of the affected processing sectors studied, it follows that today's rule would also not be "major."

#### A. Scope and Coverage of Economic Analysis

The Agency's 1985 economic impact analysis consisted of a detailed compliance cost and economic impact

analysis covering ten major primary metal smelting and refining sectors containing a total of 110 operating facilities producing 97 percent of the total U.S. nonferrous and ferroalloy product tonnage in 1983. These sectors included, among others, all of the sectors with previously listed metallic ore processing wastes (aluminum, copper, lead, zinc, and ferroalloys). According to U.S. Bureau of Mines and EPA survey data, the remaining nonferrous production is contributed to by 26 metals sectors (over 420 facilities)—many of them by-product sectors—not covered in the detailed impact assessment. A comprehensive but non-detailed evaluation was also conducted for these metals.

#### B. Methodology and Data Gathering

In 1984-85, EPA conducted a series of technical survey and sampling studies covering the major ore-processing industries mentioned above to determine the volume of wastes generated, identify those wastes which could be hazardous (because they exhibit one or more of the characteristics defined in 40 CFR 261.20), estimate the volume of these hazardous wastes, and delineate the practices used to manage these wastes. The major findings are summarized in the October 2, 1985 *Federal Register* and referenced background documents (50 FR 40298). Based on the technical survey and sampling results, a plant-by-plant waste management and compliance cost assessment was made in 1985 for all 110 facilities in the sectors studied, including those producing the six listed wastes. A complete discussion of the methodology for the ten-sector study can be found in the October 2, 1985, preamble to the rulemaking (50 FR 40298) and in the background studies for that preamble.

#### C. Costs of Compliance

In the 1985 detailed, 10-sector analysis, EPA identified 67 manufacturing facilities that would likely have incurred increased costs to comply with the 1985 proposal. Of these 67, the Agency estimates that 44 facilities would have incurred costs solely or partly due to the six listed wastes (among their other potentially hazardous wastes). See 50 FR 40299. From the 1985 study, the six wastes would have required total investment costs for compliance of about \$92 million, and total before tax annualized costs of about \$4.2 million. During 1988, the Agency revised its estimates to incorporate new data received during the comment period, including updated information from industries and the U.S.

Bureau of Mines, and modified certain of its cost-estimating assumptions and methods. Revised (1988) estimates for the six listed waste streams totaled about \$12 million in before tax annual revenue requirements.

In general, it was found that annualized compliance costs would vary considerably, both among sectors and among individual facilities within each sector. See 50 FR 40299.

#### D. Economic Impacts

Based on the compliance cost estimates and other economic variables for individual facilities in each of the 10 sectors studied, EPA assessed several categories of possible economic impacts, including efforts on production costs and prices, international trade, total investment requirements, profit (return on investment), and potential for plant closures and job losses. See 50 FR 40299. The 1985 economic impact analysis was conducted on a facility-wide basis (including all potentially affected hazardous wastes, not just those specifically listed. Therefore, quantitative impact conclusions are not available (or generally practical to deduce) for the six specific listed wastes.

#### 1. Production Costs and Prices

To assess relative effects on total production costs, zero pass-through of compliance costs to market prices was assumed, whereas to assess price changes a 100 percent pass-through of compliance costs was assumed. Therefore, these effects should be regarded as mutually exclusive estimates for purposes of presenting extreme possibilities. For the most part, these sectors compete in international markets and are limited in their ability to pass on cost changes in the form of price increases.

For the five sectors relevant to today's rule—aluminum, copper, zinc, lead, and ferroalloys—the Agency estimated in 1986 that the average increases in production costs and prices, due to compliance with Subtitle C, would be small to moderate. For zinc, which was the most affected sector, the effect on cost or price would have been less than 1.5 percent and for aluminum, copper, or lead, the effect was less than 0.25 percent. Since today's rule would only contribute a portion of these compliance costs, the effects of today's rule, taken alone, would be less than those previously estimated. Because of these relatively low effects on prices, the study did not explore any further the possible effect on international trade.

## 2. Capital Investment and Rates of Return

In its revised 1986 estimates, the Agency projected the average initial investment cost for compliance as a percent of normal annual capital expenditures to range from nominal (three to seven percent) in the aluminum, copper and lead sectors, to very large (40 to 65 percent) in the zinc and ferroalloys sectors. This result may be partly due to the abnormally depressed state of capital expenditures in the 1979-85 base period for some of these sectors. Non-growth or declining sectors generally can be expected to show very high ratios in this column due to low base capital investment figures. These estimates were also based on the extreme assumption of zero passthrough of costs to prices, a worst-case assumption that also tends to increase these ratios somewhat.

Similar reasoning may in part explain the 1986 estimates regarding the impact of this rule on rates of return on investment. In general, results here fell into two categories: The majority of sectors with maximum impacts on profit in the range of 1 to 3 percent, with zinc and ferroalloys showing compliance costs in the range of 8 to 36 percent of reductions in rate of return on investment. In part, these high percentages were due to higher than average RCRA compliance costs and in part due to lower than average baseline rates of return. Again, these results reflect the effect of all small volume processing wastes and not just the listed wastes for the five sectors.

Due to many of the Agency's estimating assumptions, these impact conclusions should be regarded as conservative on the high side.

## 3. Plant Closures and Employment Losses

Based on the Agency's 1986 analysis, plants in the ferroalloy subcategory might close as a result of removal of the Bevill Amendment exemption for these waste streams. However, all or most of these closures would be in ferroalloy segments other than those subject to today's listing for K090 (which the Agency estimates to have only two affected facilities), and none would be associated with K091 (which we believe would not be significantly affected by this rule). Most of the closures predicted in the 1986 analysis were associated with wastes (other than those being relisted today) that would be expected to be hazardous by virtue of the hazardous waste characteristics.

## 4. Compliance With Executive Order 12291

Sections 2 and 3 of Executive Order 12291 (46 FR 13193, February 9, 1981) require that a regulatory agency determine whether a new regulation will be "major" and, if so, that a Regulatory Impact Analysis be conducted. A major rule is defined as a regulation which is likely to result in:

1. An annual effect on the economy of \$100 million or more;
2. A major increase in costs or prices for consumers; individual industries; Federal, State, and local government agencies; or geographic regions; or
3. Significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

Today's rule will have none of the above effects. Therefore, the Agency is not conducting a Regulatory Impact Analysis. This rule has been reviewed by the Office of Management and Budget (OMB).

## VII. Regulatory Flexibility Analysis

The Regulatory Flexibility Act (RFA) of 1980 (Pub. L. 96-354) requires Federal regulatory agencies to consider "small entities" throughout the regulatory process. The RFA requires an initial screening analysis to be performed to determine whether a substantial number of small entities will be significantly affected by a regulation. If so, regulatory alternatives that eliminate or mitigate the impacts must be considered.

This section presents the results of the Agency's small business screening analysis, based on a review of industry plant ownership patterns and estimated compliance costs, as revised in 1986 following the October 1985 proposed rule. Based on this analysis, EPA concludes that there will not be a significant impact on a substantial number of small businesses.

In the nonferrous metals smelting and refining industry, the Small Business Administration (SBA) defines small entities based on employment levels. For most primary metal sectors, the criterion for a small entity is fewer than 750 employees; however, a higher threshold of 1,000 is used for some sectors. Based on the appropriate definitions for each sector, the Agency screened all the facilities in the ten industry sectors that were studied in detail and determined that, among these, only the ferroalloy sector contained facilities owned by small business enterprises. The 1985 analysis indicated

further that none of the ferroalloy facilities owned by small businesses were among those projected to incur costs due to this reinterpretation. Since the 1986 revision did not significantly alter the list of plants or waste streams included in the EPA data file, this conclusion should remain valid.

## VIII. Effective Date

### A. Notice and Comment Requirements

Today's rule is being issued without additional prior notice and opportunity for comment. EPA is issuing this rule directly as final for a number of reasons. First, in light of the extremely short, one-month time period allowed by the court to relist these six wastes, EPA determined that a public comment period would be impracticable and would prevent EPA from meeting the explicit deadline set by the court's order. Furthermore, EPA believes that public comment is unnecessary. By today's action, EPA is merely removing the suspension from the listings that were finalized in 1980. These listings have already been through full notice and comment procedures. When the listings were suspended, EPA explained that the only reason for suspension was EPA's belief that these wastes fell within the scope of the Bevill exemption. EPA reiterated this view when it proposed its reinterpretation in 1985. For the most part, the appropriateness of listing of these wastes under the criteria of section 3001(a) of RCRA was not an issue in the 1985 rulemaking, only whether the wastes were Bevill wastes. The Court of Appeals has now ruled that the six wastes are "clearly" not Bevill wastes. Thus, EPA's original 1980 decisions to list these six wastes is reinstated by today's action. EPA need not take public comment prior to reinstating the six listings. However, as described above in section III, EPA will treat any information on the hazards posed by these wastes submitted after 1980 as a petition for rulemaking on the listings, and will publish the results of its more detailed review of this information in the *Federal Register*.

### B. Notification

All persons who generate, transport, treat, store, or dispose of wastes which are covered by today's regulation must notify EPA or a State authorized by EPA to operate the hazardous waste program of their activities under Section 3010 of RCRA not later than December 12, 1988, unless these persons previously have notified EPA or an authorized State that they generate, transport, treat, store, or dispose of hazardous wastes and have

received an identification number (see 40 CFR 262.12, 263.11, and 265.11). Notification instructions are set forth in 45 FR 12746, February 26, 1980.<sup>9</sup> Persons without EPA identification numbers are prohibited from generating, transporting, treating, storing, or disposing of hazardous wastes.

The Agency views the section 3010 notification requirement to be necessary in this case because it is believed that many persons that manage the wastes being listed today have not previously notified EPA and received an EPA identification number.

**C. Compliance Dates**

**1. Interim Status in Unauthorized States**

Facilities that currently treat, store, or dispose of the wastes subject to this rule, but that have not received a permit pursuant to section 3005 of RCRA and are not operating pursuant to interim status, may be eligible for interim status under HSWA (see section 3005(e)(1)(A)(ii) of RCRA, as amended). In order to operate pursuant to interim status, such facilities must submit a section 3010 notice pursuant to 40 CFR 270.70(a) by December 12, 1988, and must submit a Part A permit application by March 13, 1989. Under section 3005(e)(3), land disposal facilities qualifying for interim status under section 3005 (e)(1)(A)(iii) must also submit a Part B permit application and certify that the facility is in compliance with all applicable ground water monitoring and financial responsibility requirements by March 13, 1990. If not, interim status will terminate on that date.

All existing hazardous waste management facilities (as defined in 40 CFR 270.2) that treat, store, or dispose of hazardous wastes covered by today's rule, and that are currently operating pursuant to interim status under section 3005(e) of RCRA, must file with EPA an amended Part A permit application by March 13, 1989.

Under current regulations, a hazardous waste management facility that has received a permit pursuant to section 3005 may not treat, store, or dispose of the wastes covered by today's rule until a permit modification allowing such activity has been approved in accordance with § 270.41. However, EPA has proposed a rule which would amend the permit modification requirements for newly

listed or identified wastes. For more details on this proposal, see 52 FR 35838.

**2. Interim Status in Authorized States**

Until the State is authorized to regulate these wastes, no permit requirements apply and facilities lacking a permit need not seek interim status. Any facility treating, storing or disposing of these wastes on or before the effective date of authorization of the State to regulate these wastes under RCRA may qualify for interim status but, in order to be no less stringent than the Federal program, that date *may not* be after the effective date of EPA's authorization of the State to regulate these wastes. These facilities must also provide the required 3010 notification as described in section VIII B above and must also provide the State's equivalent of a Part A permit application as required by authorized State law.

Finally, RCRA section 3005(e)(3) or any authorized State analog will apply to land disposal facilities qualifying for State interim status.

**IX. Paperwork Reduction Act**

The requirements of the Paperwork Reduction Act of 1980, 44 U.S.C. 3501 et seq., were considered in developing this regulation. This rulemaking does not contain any information collection requirements.

**List of Subjects**

**40 CFR Part 261**

Hazardous waste, Waste treatment and disposal, Recycling, Reporting and recordkeeping requirements.

**40 CFR Part 302**

Air pollution control, Chemicals, Hazardous materials, Hazardous materials transportation, Hazardous substances, Intergovernmental relations, Natural resources, Nuclear materials, Pesticides and pests, Radioactive materials, Reporting and recordkeeping requirements, Superfund, Waste treatment and disposal, Water pollution control.

Date: August 31, 1988.

**John A. Moore,**  
*Acting Administrator.*

For the reasons set out in the preamble, 40 CFR Parts 261 and 302 are amended as follows:

**PART 261—IDENTIFICATION AND LISTING OF HAZARDOUS WASTES**

1. The authority citation for Part 261 continues to read as follows:

Authority: 42 U.S.C. 6905, 6912(a), 6921, and 6922.

2. Section 261.4(b) (7) is revised to read as follows:

**§ 261.4 Exclusions**

\* \* \* \* \*

(b) \* \* \*

(7) Solid waste from the extraction, beneficiation and processing of ores and minerals (including coal), including phosphate rock and overburden from the mining of uranium ore. For the purposes of this paragraph, solid waste from the processing of ores and minerals does not include:

(i) Acid plant blowdown slurry/sludge resulting from the thickening of blowdown slurry from primary copper production;

(ii) Surface impoundment solids contained in the dredged from surface impoundments at primary lead smelting facilities;

(iii) Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production;

(iv) Spent potliners from primary aluminum reduction;

(v) Emission control dust or sludge from ferrochromiumsilicon production;

(vi) Emission control dust or sludge from ferrochromium production.

\* \* \* \* \*

3. In § 261.32, add after entries for "Iron and steel" and before entries for "Secondary lead", the following waste streams:

**§ 261.32 Hazardous waste from specified sources.**

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
Primary copper: K064.....	Acid plant blowdown slurry/sludge resulting from the thickening of blowdown slurry from primary copper production.	(T)
Primary lead: K065.....	Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities.	(T)
Primary zinc: K066.....	Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production.	(T)
Primary aluminum: K088.....	Spent potliners from primary aluminum reduction.	(T)

<sup>9</sup> Under the Solid Waste Disposal Amendments of 1980, (Pub. L. 96-452) EPA was given the option of waiving the notification requirement under section 3010 of RCRA following revision of the section 3001 regulations, at the discretion of the Administrator.

US EPA ARCHIVE DOCUMENT

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
--------------------------------------	-----------------	-------------

Ferroalloys:		
K090.....	Emission control dust or sludge from ferrochromium-silicon production.	(T)
K091.....	Emission control dust or sludge from ferrochromium production.	(T)

Hazardous Waste, add the following in the appropriate numerical sequence:

**Appendix VII—Basis for Listing Hazardous Waste**

EPA hazardous waste number	Hazardous constituents for which listed
K064.....	Lead, cadmium.
K065.....	Do.
K066.....	Do.
K088.....	Cyanide (complexes).
K090.....	Chromium.
K091.....	Do.

**PART 302—DESIGNATION, REPORTABLE QUANTITIES, AND NOTIFICATION**

1. The authority citation for Part 302 continues to read as follows:

Authority: 42 U.S.C. 9602; secs. 311 and 501(a) and 33 U.S.C. 1321 and 1361.

2. In § 302.4(a), amend Table 302.4 by adding the hazardous substances K064, K065, K066, K088, K090, and K091.

**§ 302.4 Designation of hazardous substances.**

(a) \* \* \*

4. In Appendix VII—Basis for Listing

TABLE 302.4.—LIST OF HAZAROUS SUBSTANCES AND REPORTABLE QUANTITIES

Hazardous substance	CASRN	Regulatory synonyms	Statutory		Final RQ	
			RQ ‡Code	RCRA waste No.	Category	Pounds (Kg)
K064.....			*1	4 K064	X	1 (0.454)
Acid plant blowdown slurry/sludge resulting from thickening of blowdown slurry from primary copper production						
K065.....			*1	4 K065	X	1 (0.454)
Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities						
K066.....			*1	4 K066	X	1 (0.454)
Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production						
K088.....			*1	4 K088	X	1 (0.454)
Spent potliners from primary aluminum reduction						
K090.....			*1	4 K090	X	1 (0.454)
Emission control dust or sludge from ferrochromium-silicon production						
K091.....			*1	4 K091	X	1 (0.454)
Emission control dust or sludge from ferrochromium production						

[FR Doc. 88-20780 Filed 9-12-88; 8:45 am]  
BILLING CODE 6560-50-M

US EPA ARCHIVE DOCUMENT

